WECAB

GWDW

**NPDES** 

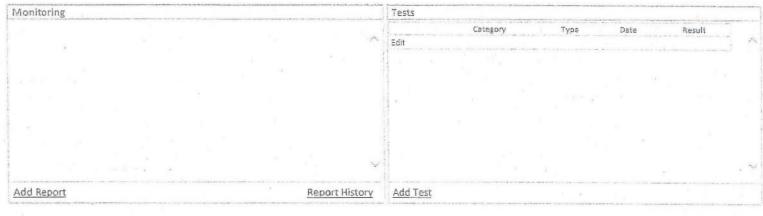
STPB

UIC

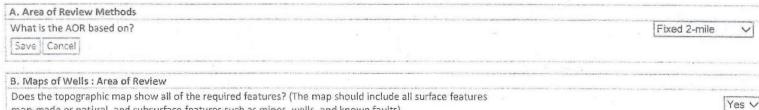
IMOD

WWW

Contacts Print Pleports I-branes Actorion Home > Technical Review Facility Name Michigan Potash Operating, LLC Contact Theodore A. Pagano Class: **FPA Permit** MI-133-1I-0005 State Permit # Permit Type Individual Permit Well Name MPC 2D Well Status Proposed Well (associated Well Status Date 1/16/2015 with permit application only) County Tribal Name







Does the topographic map show all of the required features? (The map should include all surface features man-made or natural, and subsurface features such as mines, wells, and known faults)

Are there topographic maps that extend one-mile beyond the property boundary that depict the facility and each of its intake and discharge structures, hazardous waste treatment, storage, or disposal facilities; each well where fluids from the facility are injected; and those wells, springs, and other surface water bodies and drinking water wells listed in the public records within a 1/4 mile.

Is there a list of all of the land owners within the AOR?

Surface elevation of the wellsite

The elevation is based on

Save Cancel



Yes V

## C. Corrective Action Plan and Well Data

Number of wells that are temporarily abandoned

Is the construction adequate?

Number of wells that are plugged and abandoned

Is the construction adequate?

Number of wells that are producers

				galanteniaconne		
Number of wells that are	2000 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			8		
Is the construction adequ	Jate?			Ye	3 🛂	
Number of Other Wells				0		
Is the construction adequ				NA		
Is there a corrective action				<u>NA</u>		
Number of wells that per	netrate into or throug	gh the confining zone			30	
D. Maps and Cross-section	ons of USDWs		The second secon			
Formation name of lower	st USDW:			Gla	cial Drift	0
Is there a statigraphic col	umn that shows all U	ISDWs?				Yes 🗸
Depth to base of lowest r	nost USDW(ft)					620
Method for USDW deterr	mination			hydrogeologic test l	noles .	26 Characters Lef
Save   Cancel						
F. Maps and Cross-sectio	no of the goolesis st					
Is there a regional cross-	and a district control of the contro	AND DESCRIPTION OF THE PROPERTY OF THE PROPERT	man were the first process and any research the desired from the pro-	praterioris, <del>Tomortia, persona a me</del> ssagara <del>de carac</del>	Yes V	for an incredictating or nervalen as well
Is there a site specific cre				W .	Yes V	
		Injection Interval		Confinin	ne Zone	
Formation Name		Amherstburg Formation	ì		River Group	
Lithology		Sandstone				
Depth to Top (ft)		4962		4170	te 🗀	
Depth to Bottom (ft)		5550		4962		
Permeability (md)	2	0000		14502		
				L		
Porosity (%)						
		e injection zone and the base		4342		
Were the presence and a investigated?	extent of natural or in	nduced fractures in the injection	in and confining zones ade	quately Yes V		
Save   Cancel	100					
Save   Cancer	*.		·			
H. Operating Data						
The injectate is						liquid ✓
Injection Rate Unit					Gallor	ns per minute 🗸
Method used to determin	ne maximum injection	n pressure			Fracture Grad	ient equation 🗸
						00 Characters Lef
Source of fracture gradier					Default	<u> </u>
Known fracture gradient					point terminal statement	0.80 🗸
Maximum expected injec					864000	
Maximum enforceable in						
Maximum specific gravity					1.25	
Add Safety Factor For Spe	ecinic Gravity?					
Friction Allowance Technical basis for friction	n allowance					
		mula) txtr5MipCalcFormula / Il	olr5MinCalcFormula		1269 1269	-
pH range	die(i3_imp_caic_ion	mala) casivipeacromala / il	in Sivilpealer of Thuia		1205 [1205	
Does the corrosion monit	toring comply with 40	CFR part 146 68(c)?			L	NA V
Is corrosion monitoring re		cin port aro.oo(c):				
What is the composition				Brine W	ater with Corrosio	n Inhibitors
,				\$		
						Save I Cancel I

Does the formation testing proposed meet	CFR 146.12 (d) and (e) [	for non-haz) or 14	6.66 [for haz] or	r 146.32(b) [Cla	ss III]?	Yes V
Are there adequate procedures for acquirin	ng formation pressures a	bove the injection	interval?			Yes V
Are there adequate sampling and analysis p	procedures for the first a	quifer overlying th	he confining zon	ne?		Yes v
Are there adequate sampling and analysis p	procedures for the inject	ion zone?				NA V
Will there be coring?						No V
Proposed method for determining fracture Save Cencel	gradient		****			step raie test
J. Stimulation Program		markaning per a name was recorded to the second	and a American and a second			
Is a stimulation proposed	200000000000000000000000000000000000000				100 mm m m m m m m m m m m m m m m m m m	Yes V
What is the type of stimulation?						acid
Is this type of stimulation approved?		AAAAA		e deco Anagerica e como o diácia e mais estados e		Yes V
K. Injection Procedures		Control of the Property Control	- movement of the second second			
Is there a plant plan that shows the stream	flow lines?	WENNESD HIGH BLZ V 2005		AND THE STATE OF T	Yes V	ALL AND THE PARTY TO SERVE AND THE PARTY OF
Are there descriptions of any filters, storag	e tanks, and/or pretreat	tment?			Yes V	
What is the storage tank capacity?					147000	
What is the rate capacity of the pumps?					660	
What is the pump capacity type?					(None) V	
Is an alarm system proposed?					Yes V	
What are the alarm thresholds?						
The shut-off system will be					Manual V	9
What are the shut-off thresholds?					MIP	
Save Cancel						
M. Construction Details	57 - 411 1		MONTH OF THE OWNER OF THE	· · · · · · · · · · · · · · · · · · ·		
	Pipe/Hole set				Cemented	
Fr	om top (ft) To base(ft)	) Pipe Size(in)	Hole Size(in)	Number of sacks of cement	From top(ft) To ba	se(ft)
Conductor						
Surface Casing 0	800	9.625	13.375	320	0 800	
Intermediate Casing						
Long String Casing 0	5700	7	8.75	743	0 5700	_
Liner						
Perforated Section		· Language	Lancon Control	Lance and the same of	<u> </u>	- nemand
3	700 6130					
Packer depth	5600					
Tail Pipe depth						
What is the plug back total depth?	6130					
What is the total depth of the well?	6130					
is the packer set 100 ft or less above the zone?	injection Yes					
Tubing material		~				
Tubing size						
Save Cancel						E a
for construction of the second						

O. Plans for well failure

What actions are proposed if MI is lost?				shut-in, notify EPA, CP &
Save Cancel .				
P. Monitoring Program	The state of the s			and 1934 to 15 VIV his to 1840 the same and
Where is the sample located?	The control of the co	With the second contraction of the particular of the second	TO CONTROL OF THE PARTY OF THE	At discharge of final filtra
Is there an adequate description of source(s) of wa	stp?			Yes V
Is there a representative of waste analysis?				Yes ~
What's the frequency of physical and chemical mor	nitoring?	K P		The second of th
What's the frequency of monitoring reports?				
Is there adequate waste characterization including	compatibility?			Yes V
Is a ground water monitoring plan included?				NA V
Please describe waste recharacterization.				
Is QA/QC adequate?				Yes ~
Is WAP adequate?				Yes ~
Is the monitoring and recording system for injection	n pressure, flow rate, vo	lume, and annulus pre	ssure adequate?	Yes ✓
Q. Plugging and Abandonment Plan				
How many plugs will be used to plug the well?				Generate Plugs
Signed estimate of plugging and abandonment costs	s (and post-closure costs	s, if applicable) by an ir		Yes 🗸
Estimated Plugging Cost			30400	<u> </u>
Estimated Post Closure Cost				
Date the plan was signed			0/15/10	
Date of 3rd Party Plugging Cost Estimate Save Cancel Add Plug			9/15/2	014
Transfer of the second	and Albania and Al			
R. Necessary Resources	the second to the term of the term of the second term of the second terms of the secon	*		The state of the s
Available Mechanisms	Selected	Mechanisms	The second secon	The second secon
Individual state bond DEPNO59831331 Individual state bond DEPNO59831321 Individual state bond DEPNO59831311	Add	al state bond DEPNO	59831321	
Edit Mechanisms			*	
				and the second first of a plantage and a second of the sec
S. Aquifer Exemptions				
Is the company asking for an aquifer exemption?		V-1411-4-12		N
Aquifer Name	To the contract of the contrac	None	A CHICAGO CONTRACTOR C	
Save Cancel				
T. Existing Permits		and a political programmer and the second		
List Existing permits and permit numbers				N/A
List outstanding permit applications  Save Cancel				MI-133-11-0004, -0005, 0
U. Description of Business			The second section is a second section of the second section of the second section is a second section of the section of the second section of the second section of the second section of the section of the second section of the section of t	
Business description			Production and manufa of agricultural ferti	lizer.
Save Cancel				169 Characters Left
V. Compliance with other Federal Acts				ASSESSED OF THE PROPERTY OF TH
V. Compilance With Galer reaction Acts			The state of the s	

Has the permit writer evaluated whether there are	endangered or threatened species in the A	OR?	Yes V
Are there any listed species in the AOR?			No V
Will the permit need an ESA Clause?			No V
Was the Historic Preservation Office contacted?			Yes V
Are there historic resources present?			No V
is the well located in a coastal zone?			No V
If yes, then has the permit writer contacted the Sta	ite Coastal Management Program in writing	37	NA V
Does the permit application call for the diverting, i			acres? No V
EJ number			2 ej screen
Save Cancel			Management and
and the second s			
X. Confidentiality			
Has any part of this permit application been decla	red confidential by the operator?	*	No V
Save Cancel			· <del></del>
the control of the co	en anticomment construction and all the design and the second of the sec	(8,00 may) in the first of the second contract to the second second contract to the second se	
Other	enementative success success to the	Wall Commission and C	and the second s
Seem a service record of the service of the service se	Comments	Ther.C.L. dust the included and a consequence of the consequence of th	are provided to the boundary provided and analysis and an experience of the second and the secon
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Review Completion	B 8		
Reviewer	DATKA ALLAN		
	BATKA ALLAN		
Signature Date	1/20/2016	*	
Update Cancel			